Characteristics of H-mode Pedestals in Improved Confinement Regimes in DIII-D,* R.J. Groebner, A.W. Leonard, T.C. Luce, C.M. Greenfield, G.L. Jackson, T.H. Osborne, D.M. Thomas, M.R. Wade, GA, M.E. Fenstermacher, LLNL – The characteristics of H-mode pedestals in improved confinement regimes are studied and compared to conventional ELMing H-mode discharges in DIII-D. These improved regimes include VH-mode, hybrid H-mode and Advanced Tokamak (AT) discharges. Initial results of this study show that across all regimes, 1) confinement improves as the pedestal electron beta-poloidal \( \beta_{\text{pol}(\text{ped})} \) increases; 2) the global beta-poloidal of the plasma is linearly related to \( \beta_{\text{pol}(\text{ped})} \); and 3) the scale length for the electron pedestal pressure profile is of similar magnitude. Thus, the initial results of this study show that there is a continuum of pedestal parameters with various confinement regimes falling within this continuum. In other words, the improved confinement in these regimes does not result from a dramatic change in pedestal characteristics.

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